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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/674,304

09/30/2003

Peter Poechmueller

INTECH 3.0-085

4096

530

7590

11/16/2004

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EXAMINER

AUDUONG, GENE NGHIA

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,304

Applicant(s)

POECHMUELLER, PETER

Examiner

Gene N Auduong

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10-17-03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on October 17, 2003 is being considered by the examiner.

Claim Objections

2. Claim 4 is objected to because of the following informalities: Dependent claim 4 is depending on itself. It should be depending on the independent claim or other dependent claim but itself. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsumoto et al. (U.S. Pat. No. 6,798,058).

Regarding claim 1, Matsumoto et al. disclose a semiconductor device formed in a substrate (figure 3, memory module 12), the device comprising: a plurality of circuit elements formed in a first surface of the substrate (figure 3, top surface of the chip), the plurality of circuit elements including at least one active circuit element and at least one redundant circuit element (circuitry for access and control the memory chip); at least one programmable fuse element (figure 13, memory module 12 having fuse element 50) formed in a second surface of the substrate (figure 3, repair chip form on rear surface of the module); the programmable fuse

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element storing, when the at least one active circuit element is defective, an indication thereof; and at least one interconnect connecting the plurality of circuit elements and the programmable fuse element (repair chip for storing information and repairing the defective cell; col. 16, lines 21+).

Regarding claim 2, Matsumoto et al. disclose the device of claim 1 further comprising at least one opening formed in the substrate and extending between the first surface and second surface; the interconnect passing through the opening (col. 8, lines 9+).

Regarding claims 3-4, Matsumoto et al. disclose the device of claim 1 further comprising a plurality of programmable fuse elements formed in the second surface of the substrate; wherein the plurality of programmable fuses stores, when the at least one active circuit element is defective, an address thereof (figure 3, repair chip form in the rear surface of the module having plurality of fuse element for repairing the defective cell).

Regarding claims 5-6, Matsumoto disclose the device of claim 1 wherein the at least one programmable fuse element includes a two-dimensional array of programmable fuse elements and a plurality of leads arranged as rows and columns of a grid, each of the leads being connected to the front surface of the substrate by a respective interconnect, each of the programmable fuse elements providing a respective connection between a particular column lead and a particular row lead; wherein values stored in a row of the array of programmable fuse elements are read by sequentially activating each column lead and reading an output on a respective row lead connected to the row of the array of programmable fuse elements (col. 20, lines 9+).

Regarding claim 7, Matsumoto et al. disclose the device of claim 1 wherein the plurality of active circuit elements includes a plurality of memory cells, and the redundant circuit element

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is a redundant memory cell (memory circuitry and its control device and the repair chip as redundancy circuit for the device).

Claims 8-11 and 12-14 contain the similar limitation as previously discussed in claims 1-7. Therefore, they are analyzed as previously discussed with respect to claims 1-7.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gene N Auduong whose telephone number is (571) 272-1773.

The examiner can normally be reached on 9-5-4, alternate second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GA
November 06, 2004



Gene N Auduong
Primary Examiner
Art Unit 2818